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Mineral Industry Surveys

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CHROMIUM IN MARCH 2006

On the basis of gross weight, consumption of chromium ferroalloys and metal in March 2006 increased slightly compared with revised consumption in February 2006, according to the U.S. Geological Survey.

Included in this Mineral Industry Surveys are U.S. salient chromium statistics, U.S. Government stockpile inventory of chromium materials in March 2006, consumption by end use and consumer stocks of chromium ferroalloys and metal at the end of March 2006, and U.S. foreign trade data for selected chromium-containing materials in February 2006.

Update

The Defense National Stockpile Center (DNSC) announced that 1,905 metric tons of high-carbon ferrochromium was sold in April at a value of $1.5 million or $0.375 per pound gross weight (Defense National Stockpile Center, 2006a, b).

References Cited

Defense National Stockpile Center, 2006a, Correction, Stockpile announces ferrochromium sales for April 2006: Defense National Stockpile Center, News Release DNSC-06-2759a, May 8, 1 p.

Defense National Stockpile Center, 2006b, Stockpile announces ferrochromium sales for April 2006: Defense National Stockpile Center, News Release DNSC-06-2759, May 8, 1 p.

TABLE 1
U.S. SALIENT CHROMIUM STATISTICS[1]

(Metric tons, gross weight)

	2005	2006			
	January-December[2]	January	February	March	January-March
Production:					
Stainless steel production[3]	2,240,000	213,000	200,000	223,000	636,000 [4]
Components of U.S. supply:					
Stainless steel scrap receipts	731,000	50,800	58,000	NA	109,000 [5]
Stainless steel scrap consumption	1,060,000	77,600	81,400	NA	159,000 [5]
Imports for consumption:					
Chromite ore	165,000	1,970	20,100	NA	22,000 [5]
Ferrochromium:					
More than 4% carbon	398,000	27,900	28,200	NA	56,100 [5]
More than 0.5%, but not more than 3% carbon	3,530	--	--	NA	-- [5]
Not more than 0.5% carbon	43,000	2,740	1,700	NA	4,430 [5]
Ferrochromium silicon	33,700	4,690	2,150	NA	6,850 [5]
Total ferroalloy imports	478,000	35,300	32,100	NA	67,400 [5]
Chromium metal[6]	11,000	562	779	NA	1,340 [5]
Stainless steel	770,000	63,200	64,700	NA	128,000 [5]
Stainless steel scrap	111,000	9,560	10,300	NA	19,800 [5]
Distribution of U.S. supply:					
Consumption, industry, chromium ferroalloys and metal	417,000	37,600	34,500 [r]	35,000	107,000
Exports:					
Chromite ore	42,600	462	1,830	NA	2,290 [5]
Chromium ferroalloys:					
High-carbon ferrochromium	30,700	639	603	NA	1,240 [5]
Low-carbon ferrochromium	5,460	458	129	NA	587 [5]
Ferrochromium silicon	147	--	7	NA	7 [5]
Total ferroalloy exports	36,300	1,100	739	NA	1,840 [5]
Chromium metal	1,020	69	85	NA	155 [5]
Stainless steel	371,000	31,800	36,400	NA	68,200 [5]
Stainless steel scrap	585,000	54,600	39,400	NA	94,000 [5]
Stocks at end of period:					
Consumer, industry, chromium ferroalloys and metal	XX	13,600 [r]	12,700 [r]	12,500	XX
Government stockpile:					
Chromium ferroalloys	XX	480,000	474,000	421,000	XX
Chromium metal	XX	6,190	5,590	5,590	XX

[r]Revised. NA Not available. XX Not applicable. -- Zero.

[1]Data are rounded to no more than three significant digits; may not add to totals shown.

[2]May include revised data.

[3]Data on stainless steel production reported by American Iron and Steel Institute; monthly, quarterly, and year-to-date production of stainless and heat-resisting raw steel.

[4]Includes revised data that is not broken out by specific month.

[5]Includes January to February data; March data not available.

[6]Includes waste and scrap and other.

TABLE 2
U.S. REPORTED CONSUMPTION AND STOCKS OF
CHROMIUM PRODUCTS IN 2006[1, 2]

(Metric tons, gross weight unless otherwise noted)

	February	March	January-March[3]
Consumption by end use:			
Alloy uses:			
Iron alloys:			
Steel:			
Carbon steel	337	295	943
High-strength low-alloy steel	617 r	611	1,820
Stainless and heat-resisting steel	29,700 r	30,000	92,500
Full alloy steel	1,560	1,850	5,090
Electrical steel	W	W	W
Tool steel	406	402	1,210
Unspecified steel	W	W	W
Cast irons	W	W	W
Superalloys	892 r	860	2,600
Other alloys[4]	49 r	40	126
Total	34,500 r	35,000	107,000
Total, chromium content	20,200 r	20,500	62,600
Consumption by material:			
Low-carbon ferrochromium	1,840 r	1,880	5,510
High-carbon ferrochromium	29,300	29,700	91,300
Ferrochromium silicon	2,870	2,870	8,690
Chromium metal	456 r	449	1,360
Chromite ore	W	W	W
Chromium-aluminum alloy	24	23	75
Other chromium materials	W	W	W
Total	34,500 r	35,000	107,000
Total, chromium content	20,200 r	20,500	62,600
Consumer stocks:			
Low-carbon ferrochromium	2,020 r	1,990	XX
High-carbon ferrochromium	9,340 r	9,310	XX
Ferrochromium silicon	1,060	939	XX
Chromium metal	182 r	227	XX
Chromite ore	W	W	XX
Chromium-aluminum alloy	W	W	XX
Other chromium materials	15	17	XX
Total	12,700 r	12,500	XX
Total, chromium content	7,540 r	7,490	XX

rRevised. W Withheld to avoid disclosing company proprietary data; included in "Total." XX Not applicable.

[1]Data are rounded to no more than three significant digits; may not add to totals shown.

[2]Includes estimates.

[3]May include revised data.

[4]Includes welding and alloy hard-facing rods and materials; wear- and corrosion-resistant alloys; and aluminum, copper, magnetic, nickel, and other alloys.

TABLE 3
U.S. GOVERNMENT STOCKPILE INVENTORY OF
CHROMIUM MATERIALS[1, 2]
(Metric tons)

Period	Chromium ferroalloys		Chromium metal
	High-carbon ferro-chromium	Low-carbon ferro-chromium	
2005:			
March	368,000	187,000	6,190
April	359,000	187,000	6,190
May	359,000	187,000	6,190
June	331,000	182,000	6,190
July	328,000	180,000	6,190
August	324,000	187,000 [3]	6,190
September	327,000 [3]	176,000	6,210 [3]
October	323,000	175,000	6,190
November	320,000	174,000	6,190
December	318,000	171,000	6,190
2006:			
January	312,000	169,000	6,190
February	308,000	166,000	5,590
March	276,000	145,000	5,590

[1]Data are rounded to no more than three significant digits.

[2]These Government stocks are reported by the Defense National Stockpile Center in Inventory of Stockpile Materials R-1, which reports uncommitted inventory. Uncommitted inventory is that inventory for which there is no sales contract. Committed inventory is that inventory for which there is a sales contract, however, the material has not yet been shipped. For chromium materials, the R-1 report includes chromium materials that (1) meet specifications and are held in excess of goal and (2) do not meet specifications and are held in excess of goal. The R-1 report excludes chromium materials that are committed and awaiting shipment.

[3]The increase resulted from the reclassification of physical inventory from committed to uncommitted. It did not result from the addition of chromium materials to the stockpile.

Source: Defense National Stockpile Center.

TABLE 4

U.S. EXPORTS OF CHROMITE ORE, CHROMIUM FERROALLOYS, AND METAL[1]

Period	Chromite ore		Chromium ferroalloys[2]			Chromium metal[3]	
	Gross weight (metric tons)	Value (thousands)	Gross weight (metric tons)	Chromium content (metric tons)	Value (thousands)	Gross weight (metric tons)	Value (thousands)
2005:							
February	1,540	$404	2,150	1,330	$2,910	35	$796
March	7,910	1,310	3,050	1,850	4,070	66	983
April	6,930	1,820	686	419	913	85	1,580
May	5,040	923	653	402	804	64	1,190
June	516	190	776	486	1,010	91	1,520
July	1,670	697	24,800	16,600	23,800	51	781
August	6,060	1,420	584	356	789	130	1,560
September	7,760	1,320	577	356	680	115	1,940
October	1,320	600	577	355	828	39	1,410
November	835	435	1,310	877	1,490	120	2,120
December	515	203	671	408	923	125	1,930
January-December	42,600	9,940	36,300	23,700	38,900	1,020	16,900
2006:							
January	462	199	1,100	676	1,300	69	1,600
February	1,830	344	739	447	893	85	2,100
January-February	2,290	543	1,840	1,120	2,200	155	3,700

[1]Data are rounded to no more than three significant digits; may not add to totals shown.

[2]Includes low-, medium-, and high-carbon ferrochromium and ferrochromium silicon.

[3]Includes chromium metal waste and scrap and unwrought powders.

Source: U.S. Census Bureau.

TABLE 5

U.S. IMPORTS FOR CONSUMPTION OF CHROMITE ORE, FERROCHROMIUM, AND CHROMIUM METAL[1]

(Metric tons)

	2005		2006		
	December	January-December[2]	January	February	January-February
Chromite ore:					
Not more than 40%:					
Gross weight	--	36	--	--	--
Chromic oxide content	--	11	--	--	--
More than 40% but less than 46% chromic oxide:					
Gross weight	70	29,700	233	72	305
Chromic oxide content	31	13,700	106	32	138
46% or more chromic oxide:					
Gross weight	19,100	135,000	1,740	20,000	21,700
Chromic oxide content	9,080	63,600	808	14,800	15,600
Total, all grades:					
Gross weight	19,100	165,000	1,970	20,100	22,000
Chromic oxide content	9,110	77,300	914	14,800	15,700
Ferrochromium:					
Low-carbon:[3]					
Not more than 0.5%:					
Gross weight	3,740	43,000	2,740	1,700	4,430
Chromium content	2,460	29,300	1,880	1,190	3,080
More than 0.5% but not more than 3%:					
Gross weight	--	3,530	--	--	--
Chromium content	--	2,300	--	--	--
Total, low-carbon:					
Gross weight	3,740	46,600	2,740	1,700	4,430
Chromium content	2,460	31,600	1,880	1,190	3,080
High-carbon:[5]					
Gross weight	35,700	398,000	27,900	28,200	56,100
Chromium content	21,800	232,000	18,400	18,100	36,500
Total, all grades:					
Gross weight	39,400	444,000	30,600	29,900	60,500
Chromium content	24,200	264,000	20,300	19,300	39,500
Chromium metal:					
Unwrought powders	148	1,060	103	94	197
Waste and scrap	11	63	--	17	17
Other than waste and scrap and unwrought powders	809	9,830	458	668	1,130
Total, all grades	968	11,000	562	779	1,340

-- Zero.

[1]Data are rounded to no more than three significant digits; may not add to totals shown.

[2]May include revised data.

[3]Ferrochromium containing not more than 3% carbon.

[4]Ferrochromium containing more than 3% carbon but not more than 4% carbon.

[5]Ferrrochromium containing more than 4% carbon.

Source: U.S. Census Bureau.

TABLE 6

U.S. IMPORTS FOR CONSUMPTION OF FERROCHROMIUM IN 2006, BY GRADE AND BY COUNTRY[1]

Grade and country	February			January-February[2]		
	Gross weight (metric tons)	Chromium content (metric tons)	Value[3] (thousands)	Gross weight (metric tons)	Chromium content (metric tons)	Value[3] (thousands)
High-carbon ferrochromium:[4]						
Kazakhstan	14,600	10,100	$11,400	32,000	22,200	$23,800
Russia	5,040	3,290	2,780	8,880	5,700	5,130
South Africa	3,970	1,930	1,940	3,970	1,930	1,940
Sweden	--	--	--	200	134	219
Zimbabwe	4,590	2,710	2,880	11,000	6,490	6,670
Total	28,200	18,100	19,000	56,100	36,500	37,800
Low-carbon ferrochromium:[5]						
Not more than 0.5% carbon:						
Brazil	19	14	47	19	14	47
China	--	--	--	220	146	343
Germany	280	197	641	620	435	1,410
Japan	200	140	638	420	293	1,280
Kazakhstan	513	358	660	1,080	749	1,410
Mexico	--	--	--	20	13	65
Russia	666	469	937	2,040	1,410	2,800
Sweden	19	14	68	19	14	68
Total	1,700	1,190	2,990	4,430	3,080	7,420
All grades:						
Brazil	19	14	47	19	14	47
China	--	--	--	220	146	343
Germany	280	197	641	620	435	1,410
Japan	200	140	638	420	293	1,280
Kazakhstan	15,100	10,500	12,100	33,100	23,000	25,200
Mexico	--	--	--	20	13	65
Russia	5,700	3,750	3,720	10,900	7,110	7,930
South Africa	3,970	1,930	1,940	3,970	1,930	1,940
Sweden	19	14	68	219	148	286
Zimbabwe	4,590	2,710	2,880	11,000	6,490	6,670
Total	29,900	19,300	22,000	60,500	39,500	45,200

-- Zero.

[1]Data are rounded to no more than three significant digits; may not add to totals shown.

[2]May include revised data.

[3]Customs import value generally represents a value in the foreign country and therefore excludes U.S. import duties, freight, insurance, and other charges incurred in bringing the merchandise into the United States.

[4]Ferrochromium containing more than 4% carbon.

[5]Ferrochromium containing not more than 3% carbon.

Source: U.S. Census Bureau.

TABLE 7
U.S. IMPORTS FOR CONSUMPTION OF CHROMIUM METAL IN 2006,
BY GRADE AND BY COUNTRY[1]

Grade and country	February		January-February[2]	
	Gross weight (metric tons)	Value[3] (thousands)	Gross weight (metric tons)	Value[3] (thousands)
Unwrought powders:				
China	63	$378	88	$577
Germany	15	229	15	229
Japan	5	249	43	2,000
Netherlands	6	31	6	31
Russia	5	215	27	417
Spain	--	--	19	96
United Kingdom	(4)	65	(4)	65
Total	94	1,170	197	3,410
Waste and scrap:				
Japan	10	150	10	150
Singapore	6	123	6	123
Taiwan	1	14	1	14
Total	17	288	17	288
Other than waste and scrap and unwrought powders:				
Austria	--	--	(4)	8
Canada	--	--	(4)	3
China	179	959	340	1,900
France	265	2,450	338	3,070
Germany	9	141	13	242
Russia	42	289	199	1,680
Switzerland	--	--	(4)	4
United Kingdom	173	1,290	236	1,730
Total	668	5,130	1,130	8,630
All grades:				
Austria	--	--	(4)	8
Canada	--	--	(4)	3
China	242	1,340	428	2,470
France	265	2,450	338	3,070
Germany	23	370	28	471
Japan	16	399	53	2,150
Netherlands	6	31	6	31
Russia	47	504	226	2,100
Singapore	6	123	6	123
Spain	--	--	19	96
Switzerland	--	--	(4)	4
Taiwan	1	14	1	14
United Kingdom	173	1,350	236	1,800
Total	779	6,590	1,340	12,300

-- Zero.

[1]Data are rounded to no more than three significant digits; may not add to totals shown.

[2]May include revised data.

[3]Customs import value generally represents a value in the foreign country and therefore excludes U.S. import duties, freight, insurance, and other charges incurred in bringing the merchandise into the United States.

[4]Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 8

U.S. TRADE OF STAINLESS STEEL, BY PRODUCT, IN 2006[1]

Stainless steel product	February		January-February	
	Gross weight (metric tons)	Value[2] (thousands)	Gross weight (metric tons)	Value[2] (thousands)
Exports:				
Ingot	700	$3,240	1350	$7,210
Flat-rolled (width > 600 mm)	11,800	36,100	27900	72000
Flat-rolled (width < 600 mm)	7,070	24,400	15700	53300
Bars and rods in irregular coils	738	2,940	1260	5550
Other bars and rods	2,200	14,900	4320	28700
Wire	698	4,740	1130	8300
Tubes, pipes, hollow profiles	13,200	28,900	16500	47000
Total	36,400	115,000	68,200	222,000
Stainless steel scrap	39,400	50,100	94,000	122,000
Grand total	75,800	165,000	162,000	344,000
Imports:				
Ingot	10,300	28,200	18,200	50,200
Flat-rolled (width > 600 mm)	32,200	76,000	60,600	144,000
Flat-rolled (width < 600 mm)	2,870	11,500	6,670	25,800
Bars and rods in irregular coils	1,810	5,000	4,880	13,800
Other bars and rods	7,040	26,900	13,800	54,000
Wire	2,870	12,900	6,730	29,500
Tubes, pipes, hollow profiles	7,550	47,000	17,000	103,000
Total	64,700	208,000	128,000	421,000
Stainless steel scrap	10,300	11,900	19,800	21,900
Grand total	74,900	220,000	148,000	443,000

[1]Data are rounded to no more than three significant digits; may not add to totals shown.

[2]Export value is free alongside ship (f.a.s.). Import value is Customs import value, which generally represents a value in the foreign country and therefore excludes U.S. import duties, freight, insurance, and other charges incurred in bringing the merchandise into the United States.

Source: U.S. Census Bureau.